

DATE IN 7/15/03	SUSPENSE 7/15/03	ENGINEER DLC	LOGGED IN 7/15/03	TYPE DHC	APP NO. PDCE0319647446
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

PEGGY COLE Peggy Cole Regulatory Supr. 7-14-03
 Print or Type Name Signature Title Date
pcole@br-inc.com
 e-mail Address

RECEIVED
 JUL 15 2003
 Oil Conservation Division

District I
1625 N. French Drive, Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised May 15, 2000

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

APPLICATION TYPE
Single Well
Establish Pre-Approved Pools
EXISTING WELLBORE
Y Yes No

APPLICATION FOR DOWNHOLE COMMINGLING

BURLINGTON RESOURCES OIL & GAS COMPANY PO BOX 4289, FARMINGTON, NM 87499

Operator Jicarilla 150 #8 Address G-02-26N-5W Rio Arriba
Lease Well No. Unit Letter-Section-Township-Range County
OGRID No. 14538 Property Code 16344 API No. 30-039-20338 Lease Type: X Federal State Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE	LOWER ZONE
Pool Name	OTERO CHACRA	BLANCO MESAVERDE	BS MESA GALLUP	BASIN DAKOTA
Pool Code	82329	72319	72920	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	WILL BE SUPPLIED UPON COMPLETION	5042'-5166'	7106'-7115'	7596'-7784'
Method of Production (Flowing or Artificial Lift)	NEW ZONE	FLOWING	FLOWING	FLOWING
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	Original 449 psi From Jicarilla 150 #12 offset (see attachment)	Original 1168 psi Current 370 psi	Original 858 psi Current 465 psi	Original 2810 psi Current 372 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	BTU 1240 From Jicarilla 150 #12 offset	BTU 1211	BTU 1211	BTU 1211
Producing, Shut-In or New Zone	New Zone	Producing	Producing	Producing
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: N/A Rates: See Attached	Date: 5/31/03 Rates: 137 Mcfd	Date: 5/31/03 Rates: 45 Mcfd	Date: 5/31/03 Rates: 46 Mcfd
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	WILL BE SUPPLIED UPON COMPLETION	WILL BE SUPPLIED UPON COMPLETION	WILL BE SUPPLIED UPON COMPLETION	WILL BE SUPPLIED UPON COMPLETION

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes X No
Are all produced fluids from all commingled zones compatible with each other? Yes X No
Will commingling decrease the value of production? Yes No X
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes X No
NMOCD Reference Case No. applicable to this well: DHC-959

Attachments:

- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

- List of other orders approving downhole commingling within the proposed Pre-Approved Pools
- List of all operators within the proposed Pre-Approved Pools
- Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
- Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Y. Tom Loveland TITLE Senior Reservoir Engr. DATE 7/14/03
nxo
TYPE OR PRINT NAME L. Tom Loveland TELEPHONE NO. (505) 326-9700

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs NM 88240

DISTRICT II

P.O. Drawer DD, Arma, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.		Lease Jicarilla "0" 150		Well No. 8
U.S. Latent G	Section 2	Township 26 North	Range 5 West	County Rio Arriba
Actual Footage Location of Well: 1650 feet from the North line and 1650 feet from the East line				
Ground level Elev. 6671'	Producing Formation Mesa Verde/Gallup/Dakota	Pool Otero/ Blanco/B.S. Mesa/Basin	Dedicated Acreage 159.83 319.83/159.83/19.	

- Outline the acreage dedicated to the subject well by colored pencil or ink on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary).
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

*Not re-surveyed taken
from plat:
Dated: August 25, 1970
By: James P. Leese

1650'

1650'

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Peggy Bradfield

Printed Name

Regulatory Representative

Position

Meridian Oil Inc.

Company

4-5-94

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes or actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief. 3-29-94

Date Surveyed

Neal C. Edwards

Signature of State of Professional Surveyor

3857

Certificate No.

6857

Jicarilla 150 #8
Bottom Hole Pressures
Flowing and Static BHP
Cullender and Smith Method
Version 1.0 1/14/98

Gallup		Dakota	
<u>GP-Current</u>		<u>DK-Current</u>	
GAS GRAVITY	0.703	GAS GRAVITY	0.703
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.00383	%N2	0.00
%CO2	0.01115	%CO2	0.01115
%H2S	0	%H2S	0
DIAMETER (IN)	2.375	DIAMETER (IN)	2.375
DEPTH (FT)	7111	DEPTH (FT)	7690
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	180	BOTTOMHOLE TEMPERATURE (DEG F)	190
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	391	SURFACE PRESSURE (PSIA)	310
BOTTOMHOLE PRESSURE (PSIA)	464.9	BOTTOMHOLE PRESSURE (PSIA)	372.3
<u>GP-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.6619	GAS GRAVITY	0.6619
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.31	%N2	0.31
%CO2	0.98	%CO2	0.98
%H2S	0	%H2S	0
DIAMETER (IN)	2.375	DIAMETER (IN)	2.375
DEPTH (FT)	7111	DEPTH (FT)	7111
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	180	BOTTOMHOLE TEMPERATURE (DEG F)	180
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	724	SURFACE PRESSURE (PSIA)	2323
BOTTOMHOLE PRESSURE (PSIA)	857.8	BOTTOMHOLE PRESSURE (PSIA)	2810.1

Jicarilla 150 #8 - SICP/Z Data

Zone: Mesaverde							
Date	SICP (psig)	Chromatograph Used	Z-Factor	SICP/Z (psig)	Cum Qg (MMCF)	Slope	Y Intercept
10/21/1970	1023	10/1/2002	0.9113	1123	0	N/A	1123
10/25/1971	724	10/1/2002	0.9339	775	111.3	-3.120652	1123
5/17/1973	632	10/1/2002	0.9415	671	270.66	-1.667416	1123
5/17/1976	527	10/1/2002	0.9505	554	501.64	-1.13254	1123
10/2/1980	548	10/1/2002	0.9487	578	724.7	-0.751952	1123
2/19/1986	588	10/1/2002	0.9453	622	868.94	-0.576044	1123
12/5/1990	622	10/1/2002	0.9424	660	960.74	-0.481457	1123
6/29/1995	485	10/1/2002	0.9542	508	1175.49	-0.522585	1123
???	44	N/A	1	44	2379.079	-0.453357	1123
5/31/2003	???	10/1/2002	???	336	1734.3	-0.453357	1123
Z-Factor = 0.97 SICP (psig) = 326							

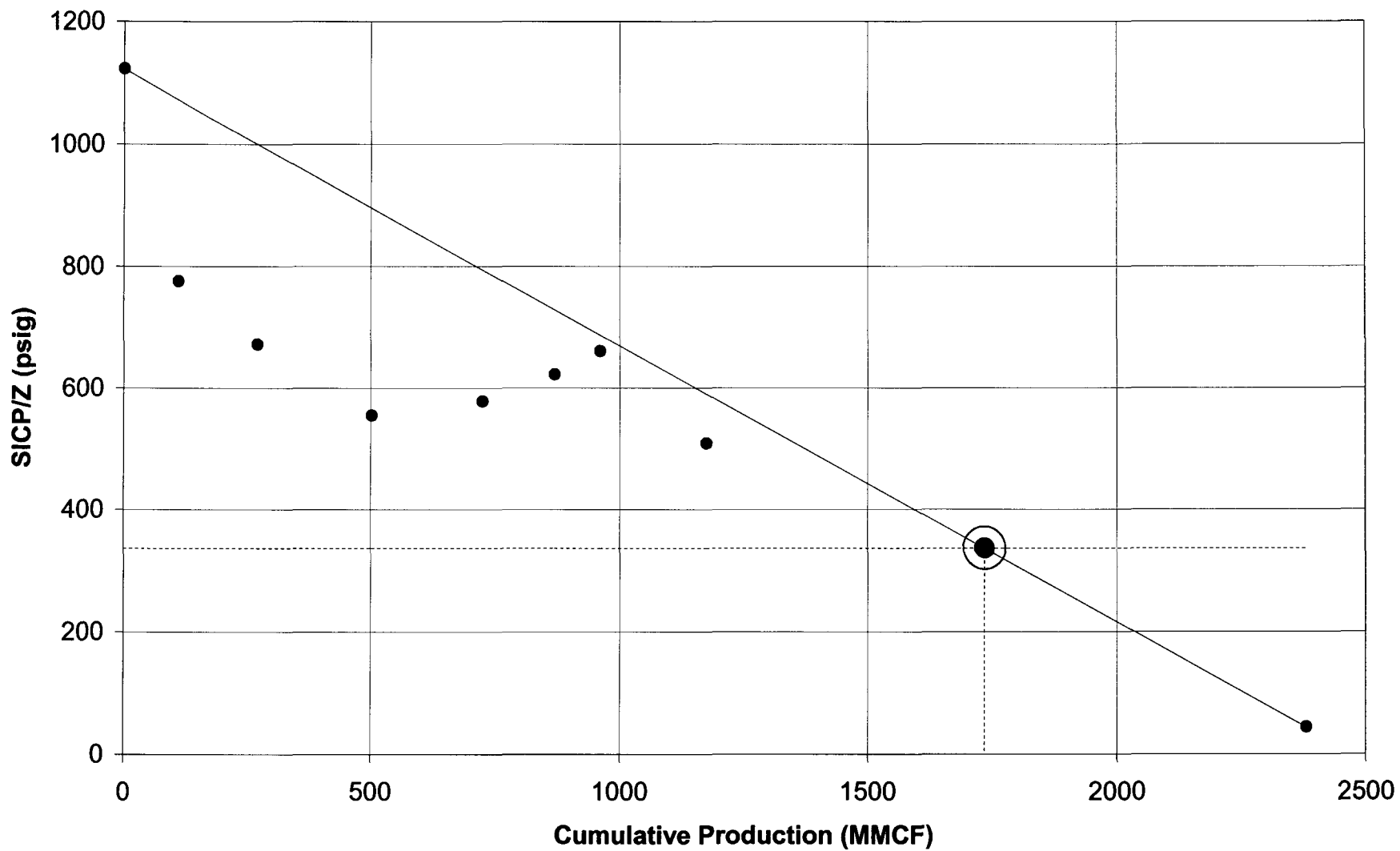
Zone: Dakota							
Date	SICP (psig)	Chromatograph Used	Z-Factor	SICP/Z (psig)	Cum Qg (MMCF)	Slope	Y Intercept
10/21/1970	2323	10/1/2002	0.8647	2686	0	N/A	2686
5/17/1973	1105	10/1/2002	0.9057	1220	350.39	-4.185137	2686
6/1/1979	839	10/1/2002	0.9248	907	891.88	-1.994952	2686
7/3/1985	931	10/1/2002	0.9179	1014	1265.12	-1.321779	2686
11/20/1989	621	10/2/2002	0.9425	659	1469.32	-1.379955	2686
9/3/1992	600	10/3/2002	0.9442	635	1612.43	-1.272007	2686
10/31/1994	577	10/4/2002	0.9462	610	1709.23	-1.214976	2686
???	44	N/A	1	44	2138.59	-1.235618	2686
5/31/2003	???	10/1/2002	???	317	1917.88	-1.235618	2686
Z-Factor = 0.98 SICP (psig) = 310							

Zone: Gallup				
SICP	Chromatograph	SICP/Z	Cum Qg	Y

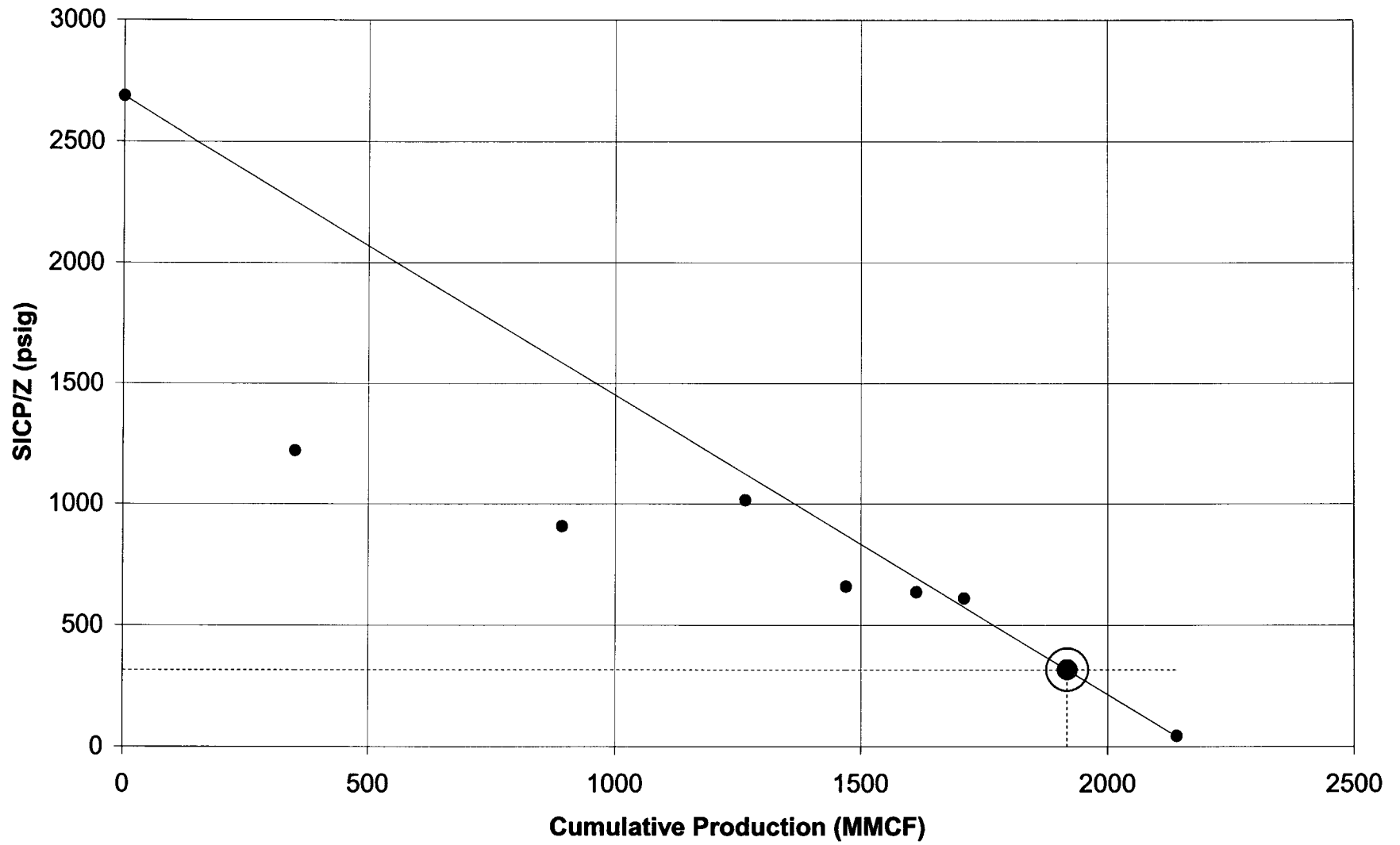
<u>Date</u>	<u>(psig)</u>	<u>Used</u>	<u>Z-Factor</u>	<u>(psig)</u>	<u>(MMCF)</u>	<u>Slope</u>	<u>Intercept</u>
2/8/1994	724	10/1/2002	0.9339	775	0	N/A	775
???	44	N/A	1	44	463.5489	-1.57749	775
						↓	↓
5/31/2003	???	10/1/2002	???	403	236.051	-1.57749	775
Z-Factor = 0.97 SICP (psig) = 391							

NOTE: THESE ARE ESTIMATES OF THE CURRENT RESERVOIR PRESSURE IN EACH ZONE. IT IS REALIZED THAT THE NEAR-WELLBORE PRESSURES FOR EACH ZONE SHOULD BE SIMILAR, DUE TO THEIR COMMINGLED STATUS.

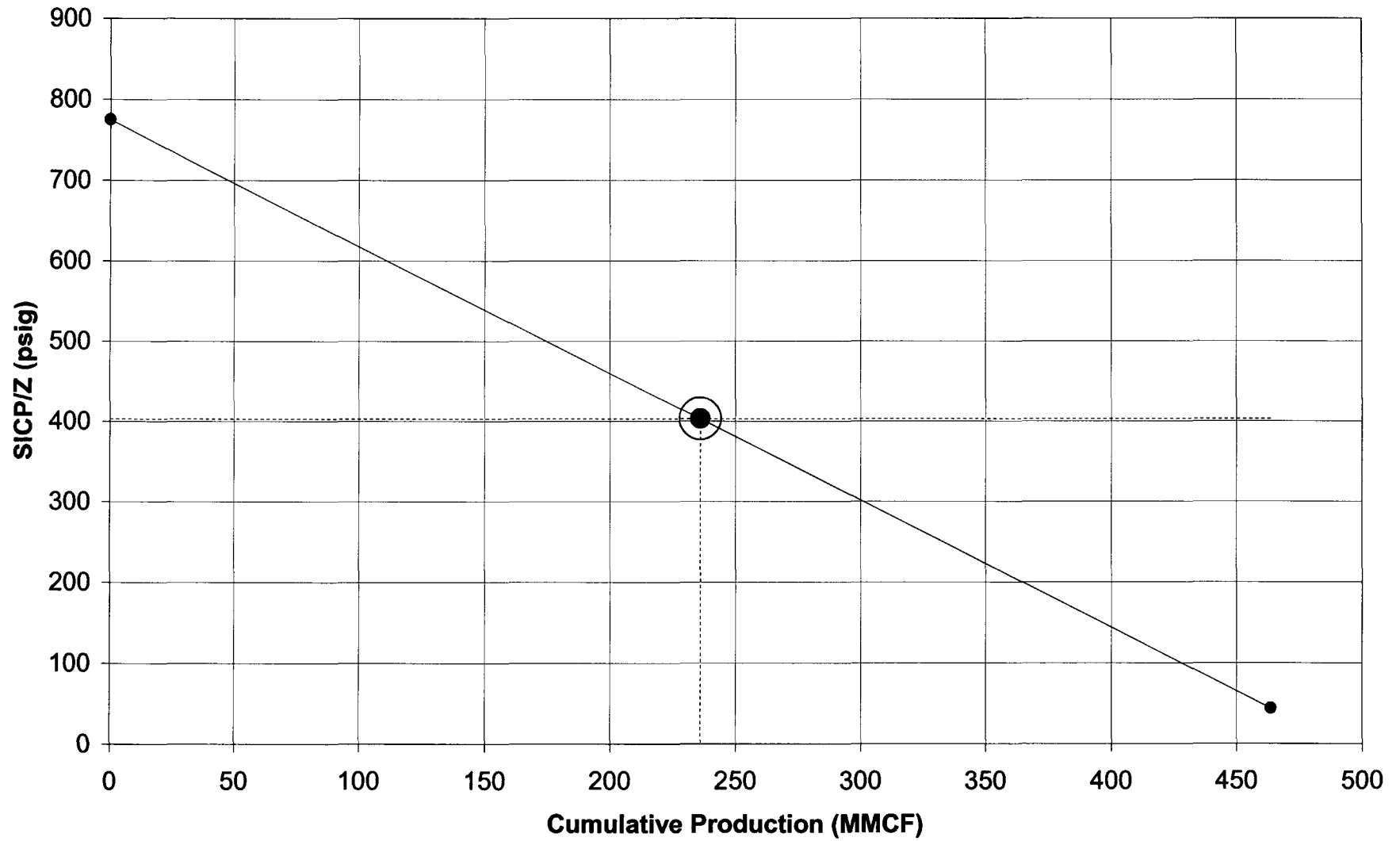
Jicarilla 150 #8 (MV)

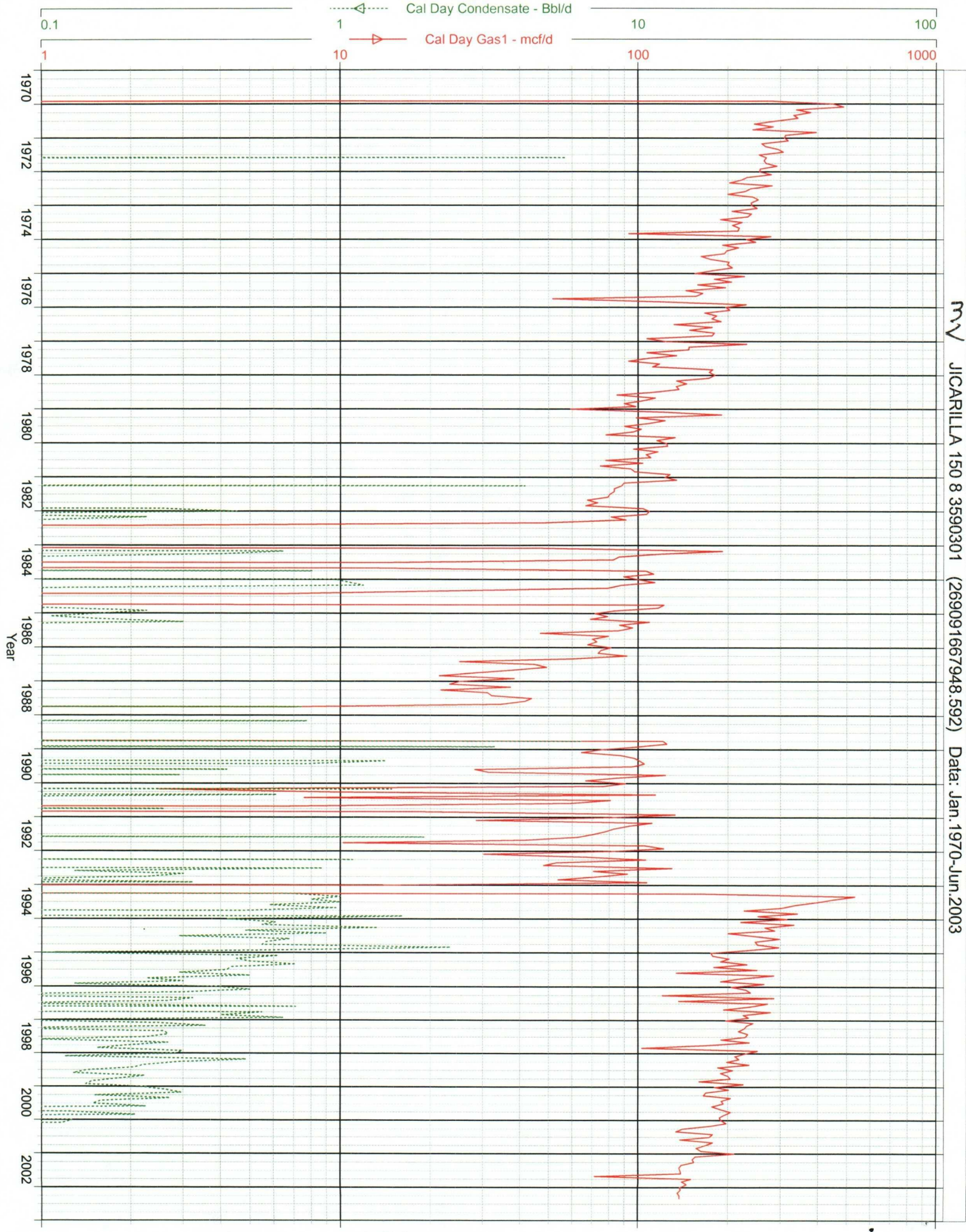


Jicarilla 150 #8 (DK)

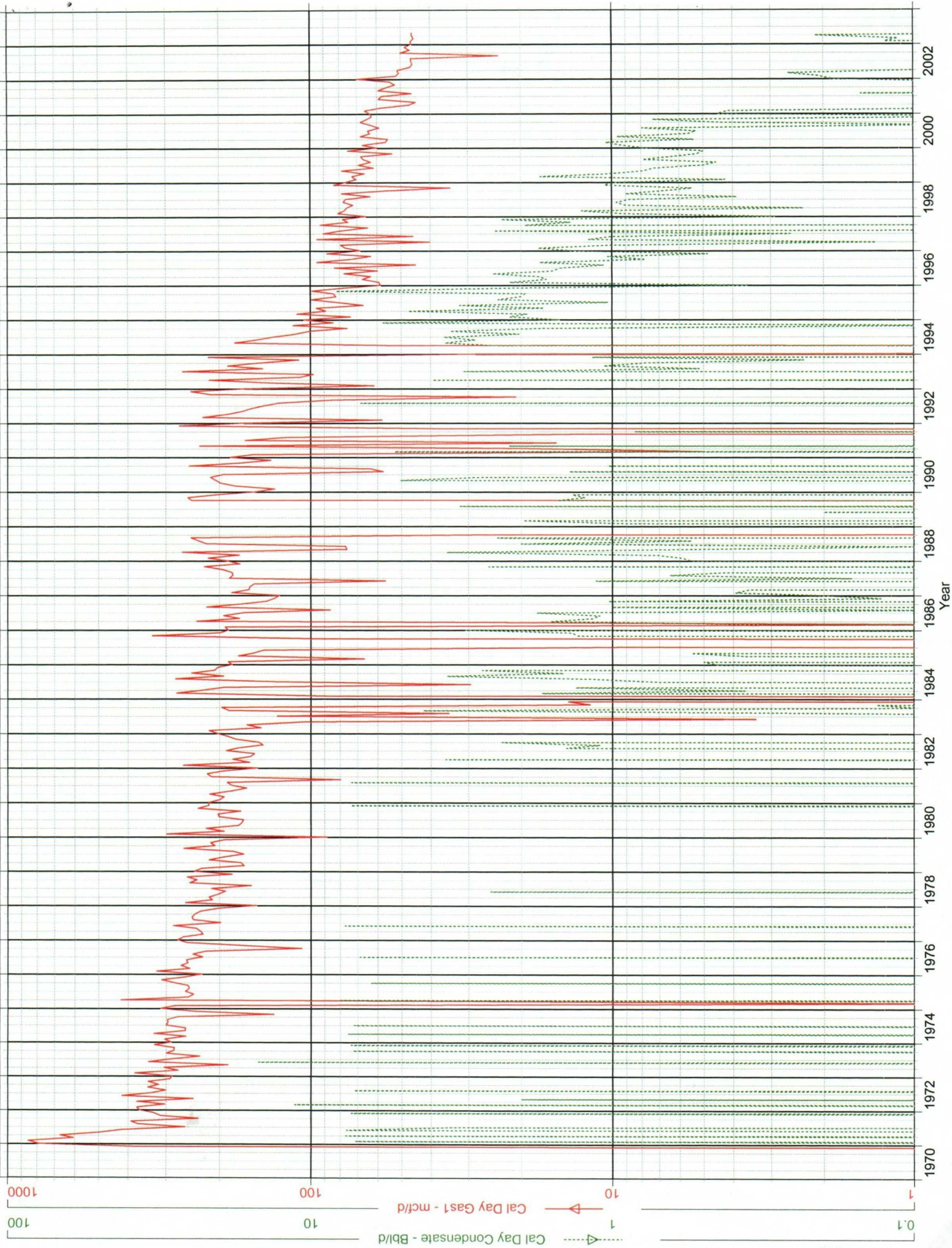


Jicarilla 150 #8 (GL)

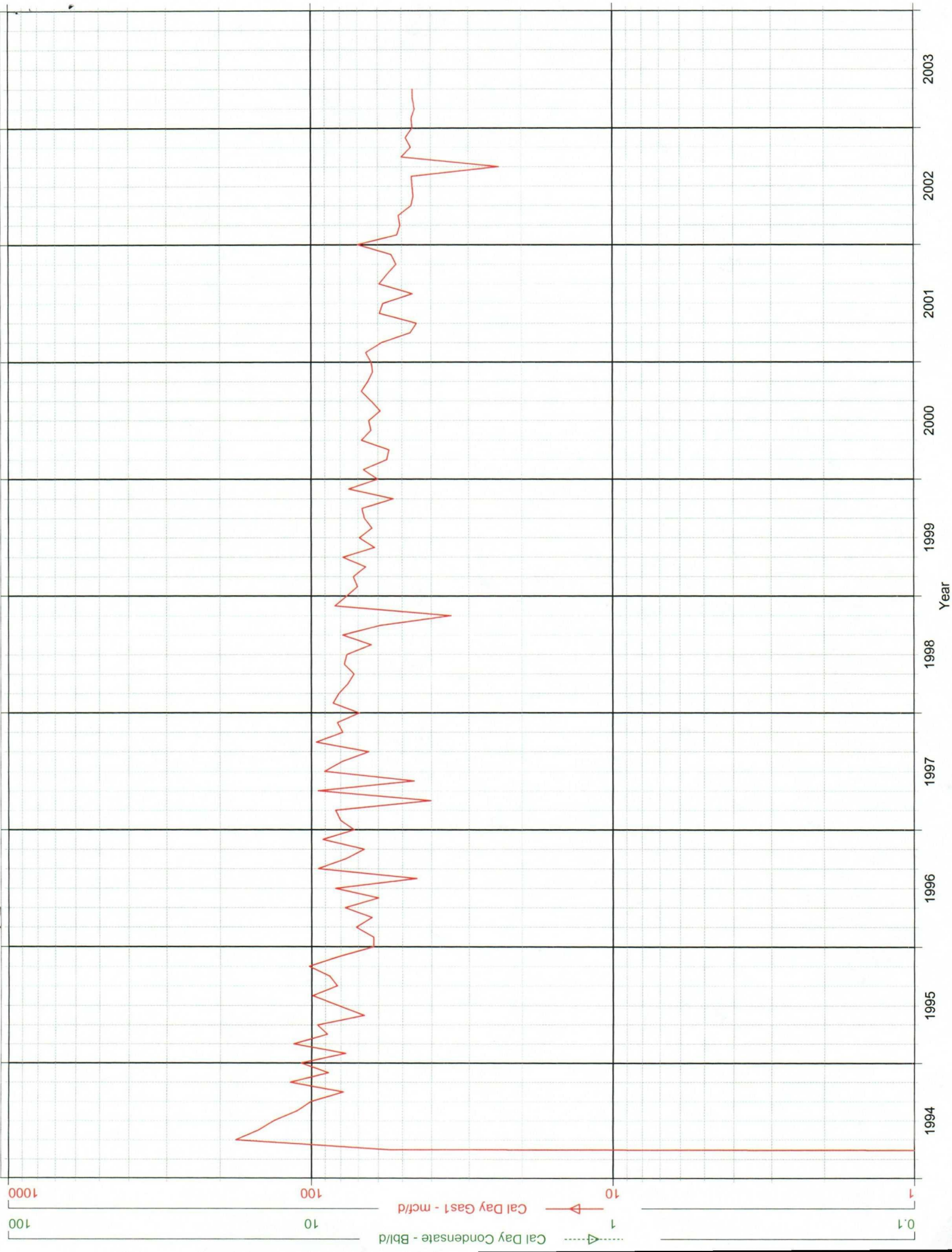




DK JICARILLA 150 8 3590302 (251505848130.793) Data: Jan. 1970-Jun. 2003



Q L JICARILLA 150 8 3590303 (300006253748.006) Data: Jan.1994-May.2003



BURLINGTON RESOURCES

Lewis Implementation Team

Memorandum

TO: New Mexico Oil Conservation Division
FROM: Lewis Implementation Team, Burlington Resources
DATE: December 2, 2002
RE: 2003 Chacra Recompletion Program Expected Production

Chacra-only production from 73 wells completed after 1970 was normalized and forecasted to result in the production model presented in Table 1. A graphical representation of this normalized production forecast is shown in the attached Figure 1. These wells are located in or near the Chacra Fairway in T-27-N, R-08-W; T-27-N, R-09-W; T-28-N, R-08-W; T-28-N, R-09-W; T-28-N, R-10-W; T-28-N, R-11-W; T-29-N, R-09-W; T-29-N, R-10-W; and T-29-N, R-11-W. Actual results from the individual payadds will certainly vary, but this production model represents the average results that should be achieved. Further delineation in the area will be made in 2003.

Table 1: 2003 Chacra production model.

Decline Type	Hyp to Exp
Initial Incremental Rate (MCF/D)	260
Initial Decline (%/yr, effective)	62
Final Decline (%/yr, effective)	1.6
Final Incremental Rate (MCF/D)	15
Hyperbolic Exponent, n	2.0
EUR (MMCF)	496

Figure 1. Graphical representation of the 2003 Chacra production model.

